

## NOTES ON WEST COAST CALYPTRAEA

BY A. M. STRONG

Recent lists and papers on West Coast shells include many changes in names from the generally accepted usage. It is to be presumed that the authors have had good reasons for these changes though in but few cases has the reason been given. Without some statement of the name under which the shell has ordinarily gone or reference to the authority for the new name the collector who wishes to keep his records up to date is forced to do a good deal of research work. These changes result in different sets of the same shell being found in collections from different localities under different names. A case in point is the Calyptraeas of the West Coast. Specimens of the three northern forms are to be found in the collections variously labeled *C. mamillaris* Brod., *C. fastigiata* Gld., *C. contorta* Cpr., and under such combinations as *C. fastigiata* var. *mamillaris* Brod., and *C. mamillaris* var. *contorta* Cpr.

Keep's West Coast Shells gives only *C. mamillaris* Brod. and states the range as Puget Sound to Central America. Williamson's List of Shells from San Pedro in Proc. U. S. Nat. Mus., vol. 15, lists *C. mamillaris* Brod. and states " = *Calyptraea fastigiata* Gld., (?) = *Galerus contortus* Cpr." The same statement appears in Arnold's Paleontology of San Pedro. Tryon's Manual of Conchology describes *C. mamillaris* Brod. and lists the following names in the synonymy: *C. regularis* C. B. Adams, *aspersa* C. B. Adams, *lamarckii* Mke., *lorica* Brod., *lichen* Brod., *unguis* Brod., *fastigiata* Gld., *solida* Rve., *poculum* Rve., *clypeolum* Rve., *fusca* Cpr., and *magellanica* Gray. The range is given as Puget Sound to South America. The only mention of *C. contorta* Cpr. in Tryon is in the list of shells which have not been seen.

Dr. Dall in his Peruvian Fauna, Proc. U. S. Nat. Mus., vol. 37, gives *C. mamillaris* Brod. and *C. lichen* Brod. as the two species of the Peruvian Province, and states that *C. unguis* Brod. is a young *Trochita*. In Bulletin 112 he gives *C. fastigiata* Gld. as ranging from Alaska to Puget Sound and *C. contorta*

Cpr. as ranging from Catalina Islands to the Gulf of California. No mention is made of *C. mamillaris* Brod. occurring from San Diego northward. Mrs. Oldroyd's recent list of Puget Sound Shells gives *C. fastigiata* Gld. as found, while Olsson in NAUTILUS, vol. 38, p. 125, lists *C. mamillaris* Brod. from Salinas, Ecuador. These later uses of the name would seem to be in part at least a return to Carpenter's separations.

In Mazatlan Catalogue, No. 333, Carpenter treats quite extensively of *Galerus mamillaris* Brod. and gives in the synonymy "+ *regularis* C. B. Adams, = *lamarckii* Mke." He states "the form *G. lichen* is probably only a flattened variety of this species; but may be distinct. The *C. mamillaris* of d'Orb. (the South American shell) is the *C. unguis* of Brod. and appears to be a distinct species of which *C. sordida* of Brod. is probably a variety." Later in his Supplemental Report, 1863, he recognizes *C. fastigiata* Gld. from Puget Sound as distinct but "like *mamillaris*", and gives us a new species *C. contortus*, Monterey to San Diego. The latter was fully described in the Proc. Cal. Acad. Sci., vol. 3, p. 215.

Carpenter based his distinctions between the three North American forms mainly on the character of the apex. Of *C. mamillaris* Brod. he says, "The vertex is about .02 across, generally rather separated from the shell, and of an elegant discoidal shape like *Planorbis*, displaying the whorls and sunken apex." As to color and size he says, "The color is often of a rich brown within and near the vertex; otherwise of a dingy white. Epidermis very thin. An extraordinarily large one measures, long. 1.26, lat. 1.23, alt. 0.56." Gould's description of *C. fastigiata* calls for a shell with "apex central, acute, the spire composed of three flattened whorls—covered with a thin pale-yellow epidermis, interior white. Diameter  $\frac{1}{2}$ , alt.  $\frac{5}{8}$  inches". Carpenter says of the species, "nucleus large, immersed". *C. contorta* is described by Carpenter as a white shell with "whorls twisted, nucleus minute, prominent." It is also much smaller, "long. 0.26, lat. 0.24, alt. 0.15."

Several hundred specimens have been examined which were recently dredged off the coast of Los Angeles County. All are white, with a shining white interior, and a minute prominent

elevated apex. The largest is only 7 mm. in diameter and they answer in every way to Carpenter's description of *C. contorta*. A number of specimens from Magdalena Bay have been examined. They were received as *C. contorta* Cpr. but have brown interiors and are over an inch in diameter. The apex is too worn to be sure of its characteristics but they would seem to answer to Carpenter's description of *C. mamillaris* Brod. and are identical with specimens so labeled from the Gulf of California. Arnold's specimen from the Pleistocene of San Pedro, diam. 33, alt. 7 mm. would seem to be the same. However a number of specimens from the Pleistocene of the Santa Monica Hills all have the small size and minute elevated apex of *C. contorta* Cpr.

Any attempt to fix range limits for these three species will have to wait for further data. *C. fastigiata* Gld. is the species of the Puget Sound District, *C. contorta* Cpr. of the Santa Barbara Channel. There may be some question as to the proper application of *C. mamillaris* Brod. to both the Gulf of California and South American forms. With the exception of *C. lichen* Brod. the southern species formerly placed in the genus are now referred to the genus *Cheilea*.

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A SHORT LIST OF LAND AND FRESHWATER MOLLUSKS FROM  
SOUTHEASTERN TEXAS

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BY WILLIAM J. CLENCH  
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The following list is based upon a small collection of mollusks sent to me by L. J. Bottimer of Liberty, Texas. I am indebted to Dr. Bryant Walker for many of the determinations:

*Helicina orbiculata tropica* Pfr. Lake Charlotte, Chambers Co., Texas. "Under drift along lake." Victoria, Victoria Co., Texas. "On trees, fences, weeds, etc."

*Praticolella berlandieriana* (Moric.). Victoria, Texas. A little heavier than usually, and faintly banded.